



## WILSON CORNERS SOIL REMEDIATION FACT SHEET

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
KENNEDY SPACE CENTER  
BREVARD COUNTY, FLORIDA

### Location

Wilson Corners is located on the north side of State Road 402 (Beach Road), immediately northwest of the intersection of State Road 3 (Kennedy Parkway).

### History

Wilson Corners was originally the location of a general store. As space-related activities developed in the area, the site was converted to a rocket engine components cleaning laboratory, which was operated by a private aerospace contractor. NASA acquired the site in 1963 and remodeled the facility into the offices and laboratory of the Propellant and Systems Components Laboratory (PSCL). Ancillary structures were added to the site, including an open cleaning tower for the solvent cleaning of fuel lines and other large components. Both domestic and laboratory wastes discharged to on-site drain fields. The predominant solvent or degreaser used at the facility until the early 1970's was trichloroethene (TCE). The PSCL operated from 1963 until 1974. NASA razed the buildings and ancillary structures, and the site was abandoned for two years. In 1976, the National Park Service (NPS) placed temporary prefabricated office buildings on the site, which became the headquarters for the nearby Canaveral National Seashore. In November 1977, a routine analysis of a water sample from an on-site potable well revealed TCE in concentrations of several thousand micrograms per liter ( $\mu\text{l}$ ).

An environmental investigation conducted by NASA determined that groundwater was impacted by volatile organic compounds (VOCs), including TCE, over a sixteen-acre area. In an attempt to clean the groundwater, a pump and treat system was installed by NASA in 1989 and continued operating into 2000. This system was designed to withdraw groundwater

and pump it to a treatment tower. The groundwater entered the tower and funneled to the bottom passing over packing material. As the water cascaded over the packing material, the VOCs were released from the groundwater and were vented to the atmosphere. NASA, FDEP, and EPA determined that based on measured contamination levels the treatment system was no longer operating effectively and additional groundwater treatment technologies should be evaluated.

### Change In Cleanup Technology

Supplemental investigations have shown that a majority of the source area is limited to an organic-rich layer of soil below the water table. This organic layer acts as sponge, which traps the TCE and continues to cause contamination. Therefore, excavation and soil treatment was selected as the new cleanup method.

### Soil Excavation and Treatment

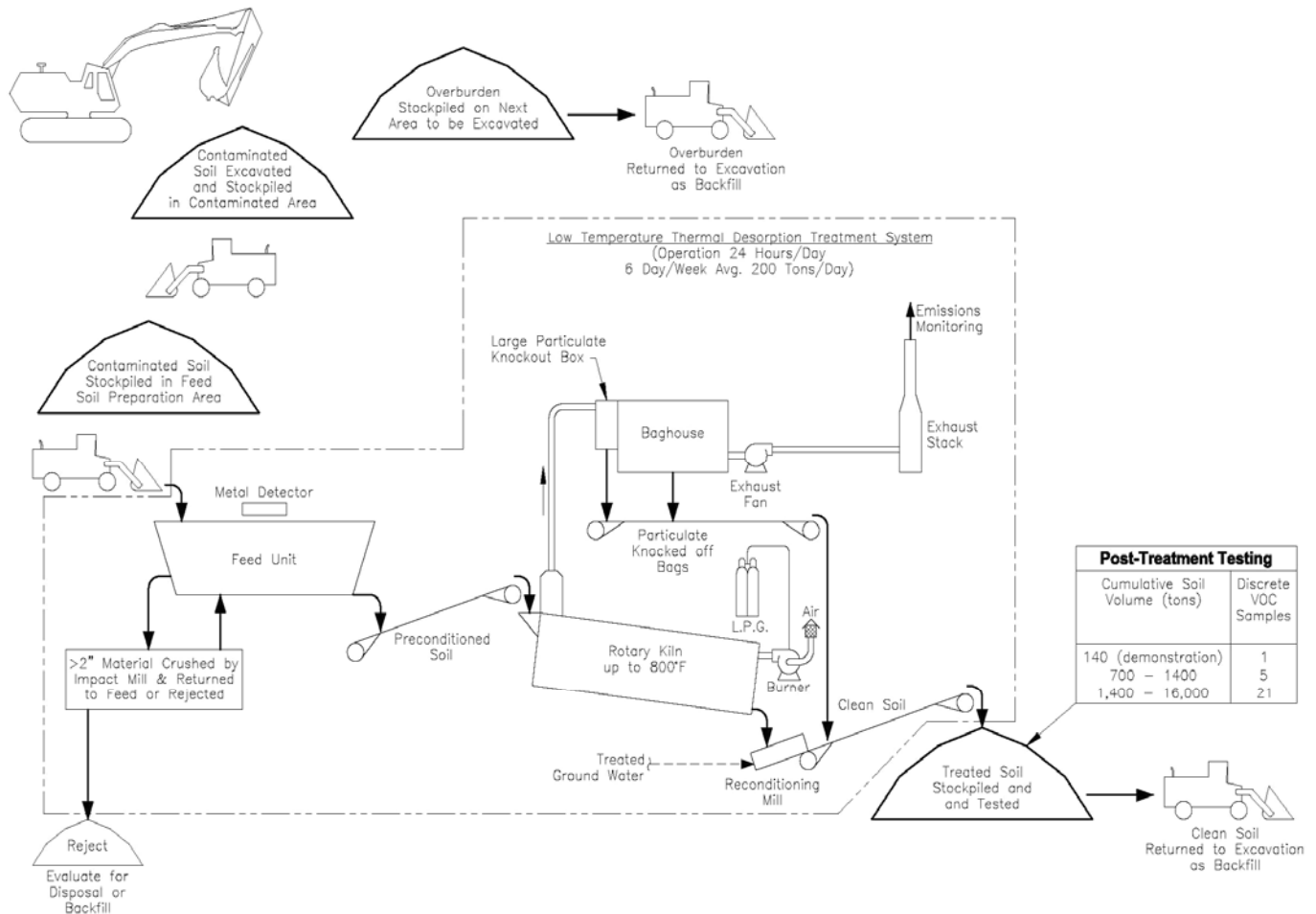
First, the non-contaminated topsoil at this site will be excavated in order to remove the organic layer and be used as fill after the excavation is complete. Secondly, a dewatering system will be installed to provide workers a dry area while removing the organic layer. The contaminated water from this task will be treated through air-strippers, which will remove the VOCs from the groundwater. Then, the organic layer will be removed and treated using a low temperature thermal desorption (LTTD) device. The LTTD will heat the soil in an "oven" and release the VOCs into the atmosphere as permitted under KSC's Title V Operating Permit. Lastly, the treated soil will be returned to the excavation. This process will last four months from the start time and treatment will be conducted twenty four hours a day seven days a week.

## Air Quality

Air emissions from the air-strippers and the LTDD will be released in the same manner as the previous technology used at this site. During handling of contaminated materials and whenever there is an open excavation, air quality at the site perimeter will be monitored no less than **six times daily**. The nearest workers are 660 feet north of the railroad track and there are passers-by on Beach Road. A photo-ionization device will monitor the air upwind and downwind. If there are any readings that are above the background for TCE and that last for more than one minute, work will be stopped until a correction to the system can be made.

## Conclusion

The organic-rich layer and soil that will be excavated and treated at this site will effectively remove the shallow source of groundwater contamination. Furthermore, natural processes should eliminate the remaining amount of shallow groundwater contamination. However, it has been determined that in the near future two more technologies will be implemented to treat deeper levels of groundwater contamination.



This Fact Sheet was written and produced by the NASA/KSC Environmental Program Office. All comments or questions can be made by calling (321) 867-6971 or by writing to the following address:

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